



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,592	11/21/2000	Glen Patrick Abousleman	GE04597	8797

7590 02/17/2005
Stanley A Schlitter
Jenner & Block LLC
One IBM Plaza
Chicago, IL 60611

EXAMINER

DASTOURI, MEHRDAD

ART UNIT PAPER NUMBER

2623

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,592

Applicant(s)

ABOUSLEMAN, GLEN PATRICK

Examiner

Mehrdad Dastouri

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed June 14, 2004, has been entered and made of record.

Response to Arguments

2. Applicant's arguments filed June 14, 2004, have been fully considered but they are not persuasive.

Applicant argues in essence that prior art of record (Vetro et al.) do not disclose defining an object class having a first object criteria and analyzing an image to determine whether an object therein is a member of such an object class based on the object substantially meeting such first object criteria.

The examiner disagrees and indicates that Vetro et al. clearly disclose the claimed invention by:

defining an object class having a first object criteria (Figures 3-7, e.g., Foreground object 301 or moving person belongs to foreground object class which is defined based on shape analysis; Column 6, Line 9-47), and

recognizing an object within the image as a member of said first object class if said object substantially meets said first object criteria of said first object class (Figures 3-7; Column 6, Lines 49-67, Column 7, Lines 1-63, in particular Column 7, Lines 1-15; Column 9, Lines 3-61).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Vetro et al (U.S. 6,650,705).

Regarding Claim 1, disclose a method of recognizing and compressing an image for transmission such that a requirement for transmission of the image is reduced while maintaining target-specific utility of the image, comprising:

defining a first object class having a first object criteria that is at least partially related to the target-specific utility of the image (Figure 5, Shape Analysis 592, Figure 6, Figure 7, Objects 711; Foreground object 301 or moving person belongs to foreground object class which is defined based on shape analysis; Column 6, Line 9-47; Column 9, Lines 3-61);

recognizing an object within the image as a member of said first object class if said object substantially meets said first object criteria of said first object class (Figures 3-7; Column 6, Lines 49-67, Column 7, Lines 1-63; Figure 5, Shape Analysis 592; Figure 6; Figure 7, Objects 711; Column 9, Lines 3-61); and

compressing at a first coding rate a first region of the image having said object recognized as said member of said first object class, said first coding rate providing a first coding resolution of said first region that is greater than a second coding resolution provided by a second coding rate for the image (Figure 3; Column 6, Lines 9-34; Column 8, Lines 58-67; Column 11, Lines 54-65).

Regarding Claim 2, Vetro et al further disclose the method of Claim 1, further comprising synthesizing an object contour of said object within the image (Figures 3 and 4. Object contours are synthesized to distinguish foreground objects from the image background.).

With regards to Claim 16, arguments analogous to those presented for Claim 1 are applicable to Claim 16.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-12 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetro et al (U.S. 6,650,705) in view of Horowitz (U.S. 4,989,257).

Regarding Claims 3 and 4, Vetro et al do not disclose the method of Claim 1, further comprising synthesizing a rotated binary image chip of said object within the image.

Horowitz discloses a method for character recognition comprising synthesizing a symmetrically rotated binary image chip of said object within the image (Figures 2, 2A-2C; Columns 6 and 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Horowitz's invention according to the teachings of Yoshikawa et al to synthesize a rotated binary image chip of said object within the image because it will reduce image processing duration by grouping character patterns.

With regards to Claim 5, arguments analogous to those presented for Claims 2 and 3 are applicable to Claim 5.

With regards to Claim 6, arguments analogous to those presented for Claim 5 and 3 are applicable to Claim 6.

Regarding Claim 7, Horowitz further discloses the method of Claim 5, further comprising:

generating a coordinate list of said outer edge of said binary image, said coordinate list specifying a bounding region enclosing said object within the image (Tables 1 and 2);

extracting an image chip from the image corresponding to said bounding region specified by said coordinate list (Figures 2, 2A-2C);

generating a binary image chip of said image chip (Figures 2A-2C); and

conforming said binary image chip to a symmetrical axis to produce said object contour (Figures 2, 2A-2C; Columns 6-10).

Art Unit: 2623

With regards to Claim 8, arguments analogous to those presented for Claim 7 are applicable to Claim 8.

Regarding Claim 9, Horowitz further discloses the method of Claim 7, wherein generating said coordinate list of said outer edge includes:

comparing the dimension of said bounding region to predetermined validation dimension (Column 1, Lines 50-67); and

validating said object if the dimension of said bounding region is less than said predetermined validation dimension (Column 1, Lines 50-67; Column 3, Lines 25-36).

With regards to Claim 10, arguments analogous to those presented for Claim 8 are applicable to Claim 10.

Regarding Claim 11, Horowitz further discloses the method of Claim 7, wherein said symmetrical axis is a vertically symmetrical axis (Figure 2A).

Regarding Claim 12, Horowitz further discloses the method of Claim 8, wherein said symmetrical axis is a vertically symmetrical axis (Figure 2A).

With regards to Claim 17, arguments analogous to those presented for Claim 3 are applicable to Claim 17.

With regards to Claim 18, arguments analogous to those presented for Claim 4 are applicable to Claim 18.

With regards to Claim 19, arguments analogous to those presented for Claim 7 are applicable to Claim 19.

With regards to Claims 20-22, arguments analogous to those presented for Claims 8 and 9 are applicable to Claims 20-22.

Art Unit: 2623

7. Claims 13-15, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vetro et al (U.S. 6,650,705) in view of Apostolopoulos et al (U.S. 6,404,814).

Vetro et al do not explicitly disclose further limitation of Claim 13.

Apostolopoulos et al disclose a transcoding method for predictively-coded object-based picture signals wherein recognizing objects within the image comprises recognizing the object within the image as a member of a first object subclass of the first object class if the object substantially meets the first object criteria of the first object class and the first sub-class object criteria of said first object sub-class (Figures 2A-2G, 8 and 9A-9L; Column 6, Lines 14-36; Column 31, Lines 58-67, Column 32, Lines 1-29).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Horowitz's invention according to the teachings of Apostolopoulos et al to implement further limitations of Claim 13 because it is a conventional methodology that will increase the accuracy of the coding system.

Vetro et al do not explicitly disclose further limitation of Claim 14.

Apostolopoulos et al disclose a transcoding method for predictively-coded object-based picture signals wherein compressing at a first coding rate of a first region of the image having an object recognized as a member of a first object class (foreground or background) comprises:

constructing a wavelet mask that provides a mapping of the first region of the image having said object recognized as the member of the first object class (Column 6,

Lines 14-36; Figures 2A-2G, 8 and 9A-9L; Column 6, Lines 14-36; Column 31, Lines 58-67, Column 32, Lines 1-29);

grouping subbands of the image into a first subband class sequence and a second subband class sequence according to the wavelet mask (Figures 2A-2G, 8 and 9A-9L; Column 6, Lines 14-36; Column 31, Lines 58-67, Column 32, Lines 1-29);

encoding the first subband class sequence at the first coding rate; and encoding said second subband class sequence at said second coding rate (Figures 2A-2G, 8 and 9A-9L; Column 6, Lines 14-36; Column 31, Lines 58-67, Column 32, Lines 1-29).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Horowitz's invention according to the teachings of Apostolopoulos et al to implement further limitations of Claim 14 because it is a conventional methodology that will increase the accuracy of the coding system.

With regards to Claim 15, Apostolopoulos et al further disclose the method of Claim 14, further comprising normalizing said first subband class sequence (Column 6, Lines 14-36).

With regards to Claim 23, arguments analogous to those presented for Claim 14 are applicable to Claim 23.

With regards to Claim 24, arguments analogous to those presented for Claim 15 are applicable to Claim 24.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2623

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEHRDAD DASTOURI
PRIMARY EXAMINER

A handwritten signature in cursive script that reads "Mehrdad Dastouri".

Mehrdad Dastouri
Primary Examiner
Group Art Unit 2623
February 16, 2005